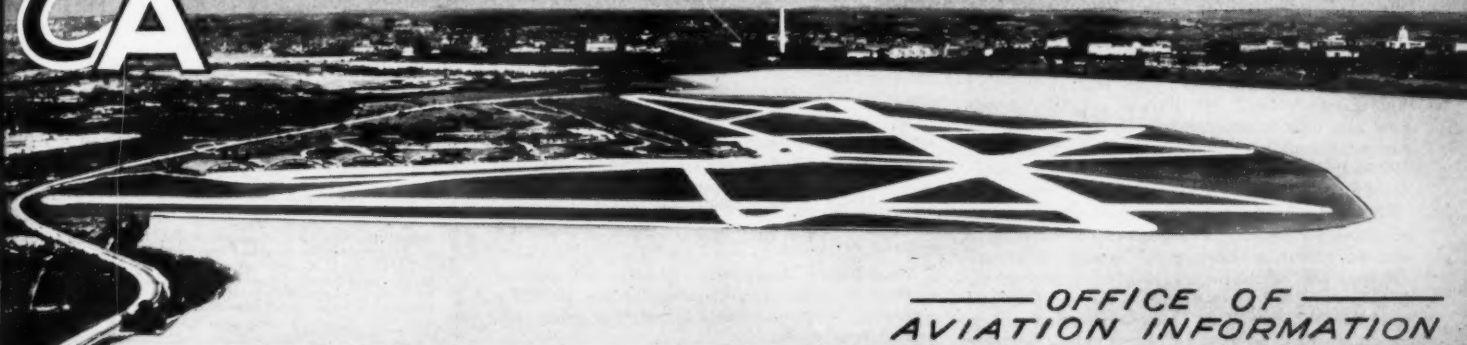


CA JOURNAL



CAA Sets Runway Standards For Six Classes of Airports

The Civil Aeronautics Administration has set maximums on length and strength of runways for which federal money will be supplied, T. P. Wright, Administrator of Civil Aeronautics, has announced.

Naming six classes of fields ranging from feeder airports, having a length of 3,500 feet, to international express airports, with runways 8,400 feet long, the Administrator listed the length, width and bearing strength of runways for each type of field.

Purpose of the order, Mr. Wright said is to guide employees of the CAA regarding approvals and recommendations for runway design; to indicate to sponsors of airport projects under the Federal Airport Act the extent to which federal funds will be applied; and to indicate to manufacturers and operators of transport type aircraft the runways which will be available.

"It is believed," the Administrator said, "that this will assist the air carrier operators in planning for the future acquisition of the type of equipment to be used on airports with standardized runways and will enable them to establish procedures which will permit, in accordance with the established Civil Air Regulations, approval of operations on a runway specified."

CAA's Office of Airports will work out with sponsors the air carrier service anticipated in the immediate future and that expected ultimately for each airport location. In determining airport classifications, they will seek the cooperation of interested aviation organizations in connection with their work in the National Airport Plan. The runway lengths established are for airports at sea level, and a temperature of 59 degrees Fahrenheit. These lengths will be increased for airport elevation by 7 percent for each 1,000 feet of elevation above sea level, and one half

of one percent for each degree by which the mean temperature of the hottest month of the year, averaged over a period of years, exceeds the standard temperature. Runway gradient also will be taken into account in determining length.

In an informal hearing on the proposal to set maximum length and strength for runways, the CAA heard representatives of the Airline Pilot's Association, the Air Transport Association and the Aircraft Industries Association oppose the plan, on the ground that limiting ground facilities would put an obstacle in the way of developing air transportation. Representatives of the national municipal associations and state aviation officials approved the plan on the ground that it would hasten development of better aircraft and operating principles and relieve taxpayers of the burden of frequent expansion of ground facilities in order to retain their air services.

Definitions of the airport classes are: Feeder airports—those serving feederline carriers; Local airports—serving smaller cities on airline trunk routes; Express airports—those at important cities or junction points on trunk routes; De Luxe airports—serving aircraft making long nonstop domestic flights; International airports—terminating long international flights; International Express airports—those serving the highest type of transoceanic flights.

Survey Reveals Skills Required By Airline Pilots

The critical requirements of the airline pilot's job are skill in making the final approach and landing, operating controls and switches, and navigating and orienting. But pilots report they are handicapped in all three by inadequacies of both ground facilities and aircraft design.

These are among the major findings in a study made with Civil Aeronautics Administration funds by the American Institute for Research, Pittsburgh, under a contract with the National Research Council's Committee on Aviation Psychology.

Flaws in Selection.—The study also indicates that methods used by the airlines in selecting applicants for pilot jobs are not successful in predicting subsequent success or failure during training. Methods of evaluating pilot performance, moreover, rely more on personal judgments than objective measurements, and do not stress the factors which cause critical incidents, the researchers found.

Information for the study was obtained by interviewing 270 airline pilots, 42 CAA air-carrier inspectors who examine airline pilots, and 16 company check pilots. The researchers also analyzed 121 Civil Aeronautics Board reports on domestic accidents of the scheduled airlines, and 1,278 CAA files of pilots who passed the physical examination for airline transport certificate (but not necessarily the written and flight tests).

Approach Most Critical.—The greatest number of critical incidents involving pilot behavior were found to occur during the approach to landing, while among the causes of unsafe flying most often mentioned by airline pilots were the lack of approach aids such as the ILS, and the inadequacies of airport lighting.

Operating controls and switches accounted for almost as many critical incidents, and at the same time "nonstandardized cockpits and instruments" stood very high on the pilots' list of causes of unsafe flying.

Navigating and orienting was the third ranking factor in critical incidents, in which connection it is significant that deficiencies in navigation equip-

(See Airline Pilot Survey page 135)

CAA Airport Standards for Air Carrier Service

	Runway, feet		Taxiway, feet width	Landing strip, feet width	Pavement loading per wheel in lbs.	
	length	width			single wheel	dual wheel
Feeder.....	3,500	100	40	300	15,000	20,000
Local.....	4,200	150	50	400	30,000	40,000
Express.....	5,000	150	60	500	45,000	60,000
De Luxe.....	5,900	150	75	500	60,000	80,000
International.....	7,000	200	75	500	75,000	100,000
International express.....	8,400	200	100	500	100,000	125,000

Plane Effect on Community Growth Cited in Burgess Real Estate Talk

The prospective 400,000 or more civil aircraft offer the greatest opportunities since the Model T for expanding our cities and towns and improving the breathing and open spaces of urban areas, George W. Burgess, Deputy Administrator of Civil Aeronautics, told the National Association of Real Estate Boards at a San Francisco meeting in November.

In his speech, "Airports in the Balance Sheet of Real Estate Values," Mr. Burgess pointed out that even now close-in and conveniently located airparks and airports at large and small towns are bringing 100 to 1,000 or more private flyers and their friends or business associates to town every month.

Bring in Business.—"Those men who use their airplanes for business and pleasure are aggressive business getters and developers," he said. "They are the type with whom the trades and industry people in your town will do profitable business. They will make capital as well as consumer expenditures in your town to its everlasting benefit only if they are attracted to it by sightly, conveniently located, and well-operated airparks and airports."

Mr. Burgess pointed out that steps are being taken to reduce plane noise and thus remove the main objection to neighborhood airports.

State, county, and city police are being encouraged to help CAA enforce the rules against low and reckless flying. The CAA has already given training to local law-enforcement officers in a dozen or more States. Similar training will begin soon in 16 more States.

Quieter Plane Demonstrated.—Methods of quieting the small personal plane itself have reached the demonstration stage. The Aeronautical Research Foundation of Boston which is applying the noise curbs worked out by the NACA have already flown their four-place Stinson airplane with a multi-bladed propeller and geared engine. After the first few flights they stated that the amount of noise reduction obtained from propeller modification alone is almost unbelievable and that instead of suffering some loss of power, due to the slower turning of the multi-bladed propeller, they have, much to their surprise, found that there is an aerodynamic "profit" of some 30 additional horsepower. Moreover, the propulsive efficiency of the slower turning propeller is appreciably higher especially at slow take-off speeds—a very important point. Members of the organization stated that even without the muffler, which had not been installed on the first flights, the plane is inaudible at 2,000 feet.

Mr. Burgess stated that he had personally witnessed a flight of the NACA experimental plane which had a five-bladed propeller. When it was flown overhead at 300 feet, closely followed by the same make of plane without modifications, the difference was incredible.

The Foundation is engaged in supplying further proof that small aircraft noise can be reduced to an inconsequential level with little or no increase in cost or weight, Mr. Burgess said.

With quieter planes in prospect, Mr. Burgess urged the real estate men to join the city fathers and enterprising aircraft and airport operators in promoting airparks similar to one recently opened in Indianapolis.

Built-in Airpark.—"This airpark," he said, "was built in close relationship with the development of an entire tract of land so as to provide a green, open space with trees and shrubbery on the sides of the single or dual landing strips. These and the hangars, administration building and shopping center, all of an attractive architectural design blend together as an attractive whole. The adjoining homes are owned to a substantial extent by owners of aircraft based at the airport. They can, if they like, wheel their

planes into their backyards and park them under the trees.

"The combined efforts of the progressive real estate man and able airplane sales, service and operations man in this direction can and will result in beautifying, opening up and developing suburban districts as well as improving rather than desecrating existing areas of this type."

Real Estate Asset.—In regard to the terminal type airport, Mr. Burgess said that the large airports have helped stimulate rather than injure real estate development. He cited as representative examples, LaGuardia Field, Denver Municipal Airport, Robert Mueller Municipal Airport at Austin, Tex., and Fairfax Field at Kansas City, Kans.

Immediately after completion of LaGuardia Field in 1939, real estate activities began on the unused farm land south and west of the airport. There had been no appreciable improvement of this land for more than 30 years. A large part of it became a housing development of row-houses and single and two-family homes, all adjacent to the airport, and its assessed value increased twentyfold.

In Denver an area of about 3 square miles adjoining the municipal airport and the Army airport which are less than a mile apart experienced more home construction from 1930 to 1946 than any other part of Denver comparable in size. All of the houses are within 1 mile of either airport, and over half of them, being between the airports, are less than one-half mile from both. This area boomed despite the availability of other equally accessible areas. The value of these residences, while mostly in the \$10,000 to \$15,000 bracket, ranges up to \$50,000.

Additions on Airport Side.—Austin's three new housing developments are located within 1 mile of the Robert Mueller Municipal Airport on a side of town well away from the site where homes in their price brackets have previously been built. In the new additions, all 279 lots have been purchased and about 125 homes are completed or near completion, ranging in value from \$10,000 to \$25,000.

Mr. Burgess commended Fairfax Field at Kansas City as an outstanding example of industrial development in combination with the development of an airport. There are 65 firms bordering or within a mile of the airport. The operators of these buildings agree that the airport is and has been a great asset and none of them expresses any objection to noise or aircraft flying over the buildings. He pointed out that these companies use the airlines extensively for passenger and cargo transportation, own numbers of aircraft, and are to an ever increasing degree gearing their administration, operation, distribution, and sales systems to aviation.

100 Airports a Month

Nearly 100 airports a month have been added to the United States total during the 3-month period since August 1, bringing the total up to 5,614 on November 1.

Commercial airports showed the greatest increase from 2,558 to 2,772, or 8 percent. Municipal airports advanced 5 percent (1,784 compared to 1,701). CAA intermediate airports declined from 184 to 179 and the military services released 70 more airports for civil use, lowering their total by 12 percent, from 586 to 516 airports.

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Civil Aeronautics Administration
T. P. Wright, Administrator
Ben Stern, Asst. Administrator
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Non-aviation Sources Of Airport Revenue Presented by CAA

Airport owners and managers searching for ways to make their airports pay will find a large number of suggested income producing sources in a new pamphlet issued by the Office of Airports of the Civil Aeronautics Administration.

The pamphlet, "Non-aviation Revenue Producing Functions for Airports," presents for the consideration of airport managers income sources outside the usual aviation revenue.

Landing fees, hangar rentals, storage, operation contracts and other aviation activities do not produce sufficient revenue to properly maintain and operate the vast majority of smaller airports.

Lists New Sources.—Additional revenue sources listed and discussed come under the headings of convenience concessions, food services, ground transportation, and real property development.

The pamphlet warns that all the possible revenue sources mentioned will not pertain to every airport. Each airport represents an individual problem.

Named as essential to personal flying airports, for instance, are telephone booths. A check room and lockers; advertisement and display area; a snack bar, game room and amusements; land rentals and agricultural development are recommended.

Suggested as feasible for this type of airport are pay toilets; telegraph; barber shop and valet service; news and cigar stand; motel accommodations; restaurant; coffee shop and employee cafe; taxi and limousine franchise; car rental service; service station; and recreational facilities.

Money in Land Use.—Real property development within and adjacent to the airport has many possibilities for revenue, the pamphlet points out.

Unused buildings and land areas on municipal airports can serve as storage space for other departments of the city, county, or State. A machine shop and a garage for the city, county, or State for maintenance of motor vehicles and road equipment is another possibility.

Net incomes of from \$1,000 to \$5,000 have been reported by many airport operators throughout the country who, through necessity, have grown hay, grain, and other crops on unused areas. One airport operator reported a profit of more than \$9,000 from the sale of tomatoes.

The pamphlet may be obtained without cost. Address requests to the CAA Office of Aviation Information, Department of Commerce, Washington 25, D. C.

New CAA Booklet Briefs Private Pilots On Problem Terrain

Flying over mountains, swamps, deserts and other problem terrain is different from flying over good old flat Indiana, the new CAA booklet, "Terrain Flying," warns beginning pilots.

To help brief pilots on what to expect and how to plan trips over unfamiliar country, the Civil Aeronautics Administration has collected into the



Pilots planning trips over unfamiliar landscapes can avoid mistakes by talking to the "senior local pilot," and heeding his advice. "Terrain Flying," offers beginning pilots the experience of a composite SLP.

book the advice of many veteran pilots from all sections of the country who know their terrain from years of experience.

The book, in effect, is like a talk with a "Senior Local Pilot" who has been everywhere from freezing Point Barrow to torrid Central America, from the swamps to the bad lands, over stump land, over deserts and over the flat, square miles of Minnesota and Manitoba, and the soggy delta of the Mississippi. It's a talk you can put in your pocket and take with you on your trip.

Why should pilots give serious study to terrain flying? The following excerpt from the booklet gives some of the reasons:

"Say you have learned to fly around Muncie, Ind. The countryside consists of fairly large and very flat fields. The weather and the winds and the towns are very well known to you, part of your daily life.

"While you are still a new pilot you take a flight to the west coast, encountering high mountains and uninhabited deserts. Your familiar friends the section lines, running north and south and east and west, designed, it seems to you, just for the convenience of pilots, disappear. The winds are all mixed up among these mountains, compared to what they were in Indiana. Even the clouds are different. And over the desert: well, you just never see anything or anybody. 'This,' you say, fighting a downdraft in a narrow valley, 'is different!'

"Or maybe you take a trip to Florida, cutting corners and flying straight courses, even if they take you over somber-looking swamps. If your engine sputtered over Ohio, you glanced casually at one of five fields into which you could make a forced landing. Over the Everglades, you almost twist your neck off trying to find a likely dry spot, and you send up a little prayer of thanks when the engine purrs again."

These are simply a few of the sectional peculiarities a pilot must be prepared to meet, the booklet emphasizes. Forewarned of special conditions by studying "Terrain Flying," and seeking further advice from any handy SLP, the pilot can adapt his flying to any terrain.

The book offers specific advice for flights over seven classes of problem terrain: Allegheny Moun-

Flashing Lights Proposed For All Planes

Flashing forward and rear position lights for all aircraft used after dark is a new safety proposal offered by the CAB Safety Bureau for industry comment.

Scheduled air carrier planes have been equipped with flashing lights for some time. The Safety Bureau proposes that this requirement be extended to all other planes used for night flying after September 1, 1949, but with a less costly and lighter flashing unit than the motor-driven flashers needed in air carrier planes to meet CAA specifications.

Flashing lights can be more quickly identified as aircraft lights than the "steady" type, the Safety Bureau points out, and they are not as likely to be confused with lights on the ground which may be below or beyond an aircraft in flight.

Several equipment manufacturers now have units well under development which will produce the recommended 40 to 50 flashes a minute and which will be nominal in price and available for installation on any aircraft. The price range of these flashes will probably be \$7.50 to \$15 each, the Safety Bureau said.

All Airworthiness Directives To Be Issued in Book Form

Beginning with 1948 the current CAA airworthiness directives issued during the previous year for all aircraft will be printed in a single book. Weekly supplements containing new material will be supplied in card form.

In addition to improving the form for issuing airworthiness directives, the mailing list is being revised to speed up distribution and insure that the material reaches those most concerned.

Those having use for the material, regardless of whether they now receive directives, must fill out and send in to the CAA the form attached to Safety Regulation Release No. 266, showing adequate need for the directives.

Previously all registered aircraft owners were sent the directives. Most of these owners, the CAA believes, can keep up-to-date by watching airport bulletin boards or by keeping in touch with local mechanics and repair stations. Only the plane owners who either do their own maintenance work or do not have regular contacts with airports and repair agencies will require the material.

Persons on the new list will receive the directive summary for 1947 in February. They will receive the first of the new cards the second week in January.

The directives warn of unsatisfactory conditions found in different plane models and order changes. They also call attention to the need for special inspections and servicing of an aircraft or parts.

tains; Rocky Mountains; swamps; deserts; cities and industrial areas; bad lands, cut-over land and frozen wastes; and oceans, bays and lakes. Separate chapters are devoted to flying in Alaska and Mexico.

The 82-page, illustrated book has been written mostly for the use of the beginner pilot who flies a small sport plane with a minimum of instruments and probably no radio and who wants to use his plane for pleasure and vacation flying. It will be available shortly at 25 cents a copy from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Private Pilots' Rule On "for hire" Flight Clarified by Wright

Conditions under which private pilots may carry passengers and ferry aircraft under Part 43 of the Civil Air Regulations have been clarified by T. P. Wright, Administrator of Civil Aeronautics.

Although private pilots are prohibited from carrying passengers for hire, this rule refers to direct compensation to the pilot for carrying persons or property and not to use of aircraft as a means of transportation for the pilot, the Administrator pointed out. The regulation does not prohibit a private pilot from carrying passengers who share the flight expenses, or when the aircraft is for the pilot's personal transportation in the furtherance of business, provided no compensation is received for carrying passengers.

In addition, a private pilot may test-fly or ferry an aircraft from point to point as long as no direct compensation is received and such services are not a prerequisite to his employment. Salaries received by an employee for normal services not incident to his flying or actual travel expenses incurred in ferrying services are not considered compensation under the regulations.

Examples of conditions under which a private pilot may use an aircraft follow:

1. Cross-country trip carrying passengers who share the expense.
2. Test-flying aircraft following repair, and ferrying aircraft from point to point.
3. As a traveling salesman the private pilot may use aircraft for his personal transportation provided the aircraft is not used to deliver merchandise sold by salesman.
4. A private pilot employed by a company for other than piloting of aircraft may carry passengers or other employees on business trips provided the trip is for his own personal transportation and other passengers are incidental to the trip.

Airline Pilot Survey

(continued from page 133)

ment, such as the absence of VHF ranges, headed the pilots' list of causes of unsafe flying.

Proposes New Check.—The report proposes that the information obtained in the present survey be used as a basis for devising an objective flight check of pilot proficiency in the most critical components of the job. Such a program would involve devising new ways of rating critical skills and experimental use of these new procedures on a pilot sample. The flight check would then be used to test the validity of new selection and training methods which emphasize the critical requirements of the airline pilot's job.

In issuing the report, Dean R. Brimhall, Assistant for Research to CAA Administrator T. P. Wright, made plain that there was no intention of requiring present airline pilots to requalify for their jobs in any way. The aims, he said, are to develop better ways of selecting, training, and examining new airline pilots from the many applicants, and to discover what improvements must be made in the pilot's tools if we are to have safer flying.

Dr. Morris Viteles, Chairman of the NRC Aviation Psychology Committee, gave special credit for planning and preparing the report to Drs. John C. Flanagan, Thomas Gordon, and H. O. Preston.

Copies of the full report are available from the CAA Office of Aviation Information, Department of Commerce, Washington 25, D. C.

Civil Aviation Highlights

	1947	1946	Change
Airports recorded with CAA, November 1	5,614	4,424	+1,190
Commercial	2,772	1,875	+897
Municipal	1,784	1,405	+379
CAA Intermediate	179	201	-22
Military	516	787	-271
All others	363	156	+207
Scheduled air carrier aircraft, November 1	957	804	+153
Civil aircraft production, September	1,028	4,090	-3,062
2-place models	547	3,554	-3,007
3- and 4-place models	431	497	-66
Over 4-place models	50	39	+11
Certificates approved, September:			
Student pilots	20,339	18,131	+2,208
Private pilots	13,441	8,160	+5,281
Commercial pilots	651	1,960	-1,309
Airline transport pilots	119	N. A.	
Mechanics	927	452	+475
Ground instructors	292	196	+96
Flight instructors	532	864	-332
Instrument rating	154	436	-282
Traffic control activity, September:			
Aircraft operations at airport towers	1,625,452	1,253,385	+372,067
Fixed postings at airway centers	878,747	819,464	+59,283

N. A.—Not available.

Civil Planes Regain 1,000-a-month Output

Civil plane production surpassed the 1,000-plane mark during September for the first time since last June. The 1,028 planes shipped had a total airframe weight of 1,559,900 pounds—increases of 11 percent in number and 17 percent in weight over the previous month. Dollar value of complete aircraft and spares also showed a gain of 28 percent over August (\$23,035,000, compared to \$18,040,000).

The combined value of both civil and military shipments was \$63,903,000 in September, a 20 percent increase from the \$53,241,000 reported in August. September employment was 143,300, compared to 144,400 in August.

Of the \$63,903,000 total, complete aircraft and parts represented \$60,878,000; conversions and all other products accounted for the remaining \$3,025,000. Military work accounted for 62 percent of the \$60,878,000 in aircraft and parts shipped.

The September civil plane shipments were:

	September	August
Total	1,028	929
By number of places:		
2-place	547	434
3- and 4-place	431	470
Over 4-place	50	25
By number of engines:		
Single engine	998	906
Multi-engine	30	23
By total rated hp (all engines):		
1-74 hp	142	141
75-99 hp	377	270
100-399 hp	477	492
400-3999 hp	9	8
4000 hp and over	23	18

1947 Pilot Crop Outstripping Previous Certificate Record

Despite a sharp decline in the commercial-pilot category, total pilot certificates issued in 1947 are running well ahead of last year. In the first 9 months of this year, 249,225 pilot certificates were

issued—48,325 or 24 percent more than were issued in the corresponding period in 1946.

Over 154,700 students received licenses this year, compared to 124,800 in 1946. Private-pilot licenses advanced from 38,250 to 89,150. The commercial category declined—5,300 certificates were issued, against 37,900. The great bulk of those pilots who were able to take advantage of the opportunity to get commercial ratings based on their wartime flying experience, did so last year.

The monthly figures on 1947 pilot certificates issued show:

Month	Total	Student	Private	Commercial
January	19,018	11,200	7,433	385
February	20,006	12,881	6,692	433
March	22,589	14,436	7,671	482
April	26,814	17,659	8,450	705
May	29,196	18,793	9,776	627
June	30,796	18,620	11,411	765
July	36,589	23,263	12,541	785
August	29,786	17,549	11,737	500
September	34,431	20,339	13,441	651
Total	249,225	154,710	89,152	5,333

Engine Output Value Shows 22% Increase in September

Engine manufacturers reported a combined output of almost \$27,000,000 in September, an increase of 22 percent over August's \$21,800,000. Military business accounted for 85 percent of the month's total volume.

Civil Aircraft Engines.—Civil shipments totaled 691 engines valued at \$2,112,000 plus \$1,794,000 in spare parts. Comparable August figures were 511 engines worth \$1,999,000 plus \$1,745,000 in spares. Expected shipments totaled 26,023 engines valued at \$36,600,000 at the end of September, an increase of 4 percent in number but a decrease of 5 percent in value from the August 31 backlog of 25,048 engines and \$38,500,000. Of the 26,023 engines on order on September 30, manufacturers expected to ship 6,950 worth \$19,200,000 in the 6-month period ending March 31, 1948.

Military Aircraft Engines.—Shipments to the military services totaled 426 engines worth \$18,045,000 plus \$4,686,000 in spares. On September 30, manufacturers of U. S. military engines reported expected receipts during the following 6-month period would come to \$147,800,000.

2,000 Nonscheduled Air Carriers Hold Operating Permits

Some 2,000 firms, operating 4,439 planes and employing 8,438 pilots, have been certified under Part 42 of the Civil Air Regulations for nonscheduled air carrier operations in the United States.

The first compilation of the new class of air carriers was made by the Non-Scheduled Operations Division of the CAA, at a time when CAA operating certificates for new companies are being issued at the rate of 200 a month. The survey reveals that nonscheduled operators are carrying everything from orchids, ripe bananas, and baby chicks to corpses. On September 30, 2,006 firms had been certificated and eight operations certificates had been canceled.

Wide Variation.—Operations vary widely in size and purpose. A rich New Yorker sometimes rents out his one private amphibian for charter trips. The Flying Tigers, composed of pilots who flew in China during the war, are operating a large fleet of two- and four-engine transports, and hold one contract for flying freight in large amounts across the Pacific. Trans-World Airlines, besides holding its certificate for scheduled operations, also holds a nonscheduled certificate and lists 20 Constellations as its equipment. In between are all kinds of operations using all types and makes of planes.

Transportation of prisoners, deportees, migrant labor, seasonal fruits and vegetables, sea food, and wearing apparel for a quick market has also become important in nonscheduled operations.

Largely Crop Dusters.—An incomplete CAA survey on industrial flying, as distinguished from nonscheduled air carrier operations, indicates that 188 firms are engaged in crop dusting; 84 in seeding from the air; 37 are towing signs; 58 towing gliders; 19 taking aerial photographs; 51 patrolling power lines; 34 patrolling pipe lines; 155 shooting coyotes; and 12 spraying to control mosquitoes.

Following is a table showing the number of nonscheduled operators, the number and kind of planes they operate:

Operators	
Using multiengine planes, 10,000 lbs. up	98
Using multiengine planes under 10,000 lbs.	198
Using single-engine planes	1,702
Total operators	1,998
Aircraft	
Multiengine, 10,000 lbs. up	479
Multiengine, under 10,000 lbs.	297
Single-engine	3,663
Total aircraft	4,439
Operations Authorized by CAA	
United States including possessions and territories	82
Foreign	172
Contact night	314
Instrument day	312
Instrument night	197

Of the total operators, 166 use seaplanes or amphibians and 2 use helicopters. Included in the total aircraft are 25 multiengine seaplanes or amphibians; 209 single-engine seaplanes or amphibians; and 5 helicopters.

Pakistan Joins ICAO

The newly created state of Pakistan became a member of the International Civil Aviation Organization on December 10. With Pakistan, 45 countries are now members of ICAO.

CAA Considers Plan For Renting Planes Used by Inspectors

Rental of light, civilian aircraft from local, private flight contractors for use by CAA inspectors is a plan now under consideration by T. P. Wright, Administrator of Civil Aeronautics.

This plan has been recommended to the Administrator by a special CAA committee after study of three possible methods to enable CAA inspectors in the field to cover their extensive itineraries throughout the year by air within the limits of appropriated funds. Not only would this plan make possible the amount of flying necessary for the increasing activities of the CAA but the rental money would be a source of additional revenue for the fixed base operators.

Running Out of Funds.—The committee pointed out that the limited funds for maintenance and operation of CAA aircraft will not permit sufficient inspection travel under present arrangements. Use by inspectors of CAA-owned war surplus planes, AT-6 advanced trainers which cost about \$25 an hour to fly, already has resulted in almost complete curtailment for the remainder of the year of inspector flying as a result of lack of funds. Transfer of these planes to CAA was authorized by Congress in 1945 in lieu of appropriations for purchase of new light aircraft. If the new plan is adopted, these planes would be turned over to War Assets Administration for sale.

Rental of civil airplanes, which the committee believes should be possible on an annual contract basis at a rate of about \$10 an hour, would enable the CAA inspectors to stretch their flying time to the 40,000 hours estimated as necessary for the transaction of their official duties during fiscal 1949. At the same time, it would be possible to continue to operate the CAA's twin-engined planes in airway patrol, foreign operations and standardization training, at the existing rate of some 34,000 hours a year.

Other Alternatives.—Two other plans were considered but not recommended to the Administrator. One was the purchase of new planes of a type less expensive to operate. The committee doubted whether Congress would appropriate funds for such a purchase. Another was to reduce the flying time of the larger planes, so that more time might be made available in the inspectors' planes. The larger planes, Beechcrafts and Douglasses are used in the daily check flying which is vital to the safe operation of the Federal Airways system of 40,000 miles.

"It is believed," the committee reported, "that aircraft can be rented on a yearly contract basis with a minimum and maximum number of flight hours, at a cost of approximately \$10 an hour, which would make 40,000 flying hours possible. It is expected that the appropriation language which would give the CAA authority to rent aircraft can be obtained without undue difficulty, but that necessary legislation and funds for the purchase of new aircraft at this time would be highly doubtful."

Permit to Swiss Carrier

International air service from Geneva and Zurich, Switzerland, to New York City has been granted by the CAB to the Swiss Air Transport Co., Swissair. Intermediate points are Shannon, Eire; Santa Maria, the Azores; and Gander, Newfoundland. Swissair plans to schedule one round trip flight each month at the outset. The permit was granted on the basis of the United States-Switzerland air transport agreement.

New Price Set for Duplicate Airman's Documents

One dollar is the new price the CAA Airman's Service is charging airmen to duplicate a certificate and rating record which has been lost, mutilated or destroyed. The previous cost was one dollar each for the certificate and rating record.

The CAA asks airmen to take note of this change and make certain they send in the right amount of money when they're requesting a duplicate certificate.

Disregard any fee other than one dollar which may be printed on the back of the certificate and rating record, the CAA says. Future reprints of the form will be revised to indicate the correct charge.

Attention of pilots is also called to the fact that duplicate medical certificates are issued at the discretion of the examining physician. Such requests must be made directly to the physician who performed the examination.

Two Northwest Stops Only Service Granted In Chicago-Seattle Case

Further trunkline and feeder service in the Chicago-Seattle area were denied in a recent CAB decision, with the exception of stops at Great Falls and Kalispell, Mont., awarded Northwest Airlines.

The CAB gave duplication of service and mail pay costs as its reasons for denying the new feeder and pick-up service proposed by Duluth Airlines and G. I. Airlines, and the trunkline proposals of Great Northern Airlines and Western Air Lines.

Great Northern's trunkline operations over a route of 2,051 miles would mean a mail pay cost of a million dollars a year, and require the establishment and annual maintenance of airways navigation facilities amounting to \$1,142,000 and \$408,000 respectively. This cost outweighs the benefit to a comparatively slight population, the CAB said.

The CAB found that all the points requested by Western are on the routes of other trunkline or feeder carriers, and the slight benefit from Western's certification would be outweighed by its adverse effect on those carriers.

Eight of the points to which Duluth proposed local feeder service are on the routes of trunkline carriers, and 13 of the remaining points were awarded Wisconsin Central Airlines in the North Central case, the CAB stated. The three routes requested by Duluth between Chicago and Fargo, N. Dak., via numerous points in Wisconsin, Minnesota and Michigan would duplicate Wisconsin Central's service to a large extent and subject that carrier to unnecessary competition before it has had an opportunity to prove its ability to operate its routes without undue cost to the Government.

G. I. Airlines requested routes totaling 3,508 miles in length, using the pick-up method of transporting mail. Thirty-three of the proposed stops are on routes awarded in the North Central case, the CAB pointed out. It stated that while additional airway facilities might not be necessary for G. I.'s proposed service, annual mail pay of \$1,779,893 would be needed to enable the carrier to break even.

Northwest is prohibited from serving Great Falls on flights serving Billings, Bozeman, Butte, or Helena, Mont., and from Kalispell service on flights serving Bozeman, Butte, Helena, or Missoula, Mont.

Aviation Experts Form Faculty Of Air Transportation Institute

Aviation experts drawn from the Government, the industry and national air organizations will make up the faculty of the second air transportation institute to be given January 7-30 in Washington, D. C.

The institute is offered by the American University in cooperation with the Civil Aeronautics Administration and the Air Transport Association to give present and future executives an over-all view of the air transportation picture.

Among the nationally known guests who will address evening meetings will be T. P. Wright, Administrator of Civil Aeronautics. He will speak on "The Role of Government in Promoting Civil Aviation." James M. Landis, Chairman, Civil Aeronautics Board, will be moderator at a round table discussion on "Air Policy."

Students for the 3-week institute may be selected by their agencies or companies. Others may apply for admission by submitting information about their educational background or their practical experience. Tuition will be \$90, and veterans may participate under the provisions of Public Law 346.

Applications for admission and requests for information are to be sent to Dr. L. M. Homberger, The American University, School of Social Sciences and Public Affairs, 1901 F. Street NW., Washington 6, D. C. The last registration day will be December 30.

Subjects on which CAA officials will lecture are: "Airport Design, Construction, and Maintenance," Paul Morris, Director of Operations, Airport Service. "Airways and Traffic Control," Charles W. Carmody, Chief, Airport Control.

"Communications," H. J. Carrick, Chief, Fixed Aeronautical Communications Section.

"Maintenance of Airline Equipment," A. F. Notley, Chief, Air Carrier Maintenance Division.

"Safety," Richard E. Elwell, General Counsel.

"Public Relations," Ben Stern, Assistant Administrator, Office of Aviation Information.

"Aviation Education," H. E. Mehrens, Chief, Education Division.

Subjects on which CAB officials will lecture are:

"The American Air Transportation System," David W. Bluestone, Chief Analyst, Analysis Division.

"Federal and State Regulation," Merrill Armour, Assistant General Counsel.

"Entry into Business; New Routes," Louis W. Goodkind, Assistant Director, Economic Bureau.

"Rates," William C. Burt, Chief, Rates Section, Legal Finance Division.

"Mergers, Consolidations, Contractual Arrangements," Emory T. Nunnely, General Counsel.

"International Organizations," Sydney B. Smith, Chief, Foreign Air Transport Division.

"Weather Service," will be discussed by B. C. Haynes, Chief, Observation Section, U. S. Weather Bureau; and "Mail," by Robert F. Burgess, Deputy Second Assistant Postmaster General for Air Postal Transport.

WNA Traffic Holds Own

Airline passenger traffic at the Washington National Airport held up well during October. Total passenger business was only slightly below September—110,300 passengers compared to 110,500. There were 57,300 passenger departures and 53,000 passenger arrivals.

Total airline arrivals and departures held the September pace of 9,100. Military aircraft operations dropped 5 percent (1,244 against 1,304); local and itinerant operations increased 9 percent (from 3,020 to 3,289). Combined traffic operations for all aircraft (air carrier, military, local, itinerant) ran to 13,639 arrivals and departures, an average of 440 take-offs and landings every 24 hours.

Regulations

Amdt. 03-3-----Effective January 1, 1948

This amendment, as well as 04a-1, 04b-8, and 06-1 which have the same wording, allows the CAA to use a simplified method of approving appliances. In place of type certifying each appliance or variation, which requires examination and approval of detailed data, the CAA will publish specifications in the form of "Technical Standard Orders." The manufacturer must then see to it and certify that the appliance meets the specifications. This approval method will also apply to materials, parts and processes.

1. Part 03 is amended by adding the following new section:
03.06 Approval of materials, parts, processes, and appliances. Materials, parts, processes, and appliances shall be approved upon a basis and in a manner found necessary by the Administrator to implement the pertinent provisions of the Civil Air Regulations. The Administrator may adopt and publish such specifications as he finds necessary to administer this regulation, and shall incorporate therein such portions of the aviation industry, federal, and military specifications respecting such materials, parts, processes, and appliances as he finds appropriate.

Any material, part, process, or appliance shall be deemed to have met the requirements for approval when it meets the pertinent specifications adopted by the Administrator, and the manufacturer so certifies in a manner prescribed by the Administrator.

2. By repealing section 03.300.

Amdt. 04a-1-----Effective January 1, 1948

Add new section 04a.07 to Part 04a with the same wording as that given in section 03.06 above.

(This amendment will be No. 1 in the new Nov. 1, 1947, edition now being printed. It is the ninth amendment to the 1943 edition.)

Amdt. 04b-8-----Effective January 1, 1948

Add new section 04b.05 to Part 04b with the same wording as that in section 03.06 above.

Repeal section 04b.300.

Amdt. 06-1-----Effective January 1, 1948

Add new section 06.05 to Part 06 with the same wording as that in section 03.06 above.

Amdt. 41-14-----Effective November 21, 1947

Under the following amendments to Part 41, air carrier dispatchers may delegate authority to sign flight clearances, and to load the plane and sign the load manifest forms to persons who are not employed by the air carrier. The dispatcher remains responsible for the flight and proper loading.

1. Amend section 41.406 and 41.4060 to read:

41.406 Maintenance release, clearance, and load manifest forms. All maintenance release, clearance, and load manifest forms used for approval by the Administrator. The original copies of such forms shall be given to the first pilot and duplicate copies kept in the station file for at least 90 days.

41.4060 Preparation of maintenance release form. A maintenance release form shall be prepared for each aircraft delivered by the maintenance department to the operations department. This form must be signed by personnel of the air carrier charged with the duty of supervising the maintenance of the aircraft.

2. Add new sections 41.4061 and 41.4062 to read:

41.4061 Preparation of clearance form. A clearance form shall be prepared for each flight between specified clearance points. The information for such clearance shall be prepared by the authorized aircraft dispatcher of the air carrier operating the aircraft. This form shall be signed by the first pilot and by the authorized aircraft dispatcher only when both believe the flight may be made with safety. The authority to sign such clearance may be delegated for a particular flight by the authorized aircraft dispatcher, but the authority to dispatch cannot be delegated, and such dispatcher remains responsible for the dispatch and continued supervision of the flight.

41.4062 Preparation of load manifest form. A load manifest form showing the loading of the aircraft shall be prepared and signed for each flight by qualified personnel of the air carrier charged with the duty of supervising the loading of the aircraft and the preparation of the load manifest forms, or by qualified persons authorized by the air carrier. The aircraft when loaded shall not exceed the center of gravity limits or maximum allowable weight limits set forth in the aircraft certificate for the particular aircraft.

Special Reg. 390-B-----Effective November 28, 1947

Extends until May 1, 1948, special CAR 390 which allows for equipment shortages in complying with the new fire prevention requirements set by amendments 41-3, 42-2 and 61-2. Previous deadlines were November 1 and December 1, 1947.

Special Reg. 403-----Effective November 15, 1947

This regulation allows presently employed and qualified air carrier flight navigators until March 15, 1948, to get certificates. The time has been extended because the airlines were unable to complete certification of all their active flight navigators by November 15 during the peak traffic season. Special Regulation 403 reads as follows:

"An airman who has successfully completed a flight navigator training course established by a scheduled air carrier and who is, as of November 15, 1947, authorized by an air carrier to serve as a flight navigator in scheduled air carrier operations may continue to serve in such capacity until March 15, 1948, notwithstanding the provisions of § 41.330 of the Civil Air Regulations."

Special Reg. 404-----Effective November 1, 1947

Landing flare equipment has been banned for Douglas DC-6's until a recent accident at Bryce Canyon is completely investigated. The landing flare equipment carried by the plane may have contributed to the intensity of the fire occurring in flight, a preliminary investigation revealed. Special Regulation 404 reads: "Notwithstanding the provisions of the Civil Air Regulations requiring the carriage of landing flares on aircraft operated at night, Douglas DC-6 type aircraft shall not be operated with landing flare equipment installed in such aircraft. This regulation shall terminate February 1, 1948."

Airline Orders

E-877 reaffirms earlier order denying petition of Pacific Overseas Airlines for reopening the Hawaiian case. (Oct. 14)

E-878 institutes a new proceeding to determine if another carrier in addition to Pan American, should be granted service between Los Angeles and Hawaii. (Oct. 14)

E-879 permits Colonial to merge its New York-Bermuda end Washington-Bermuda service. (Oct. 15)

E-880 denies Trans-Caribbean Air Cargo Lines temporary exemption permitting four round-trip passenger-carrying flights between New York and Europe during November and December. (Oct. 15)

E-881 denies exemption request of Arizona Airways for service between Nogales, Ariz., and Las Vegas, Nev. (Oct. 15)

E-882 denies National's petition for reconsideration of the foreign permit granted Peruvian International Airways. (Oct. 16)

E-883, E-884 and E-885 propose a mail-rate increase for the trans-Atlantic operations of Pan American, American Overseas and TWA. (Oct. 16)

E-886 consolidates application of Catalina Air Transport for mail service between Catalina Island and Los Angeles with the Additional California-Nevada Service case. (Oct. 16)

E-887 proposes a temporary mail rate of 25 cents a plane mile for Colonial's Bermuda service. (Oct. 17)

E-888 suspends letter of registration of American International Airways, a nonscheduled carrier, and orders carrier to show cause why its "letter" should not be revoked. (Oct. 17)

E-889 dismisses applications of Transairways, Julius E. Nervo and Pacific Air Transport from the Additional California-Nevada Service case for want of prosecution. (Oct. 17)

E-890 permits Needles, Calif., and the Modesto, Calif., Chamber of Commerce to intervene in the Additional California-Nevada Service case. (Oct. 20)

E-891 dismisses route application (docket 935) of Northwest Airlines upon request of the carrier. (Oct. 20)

E-892 amends TWA's certificate to provide that Columbus or Dayton, Ohio, be served on all flights which serve Cincinnati and Washington, D. C.—issued with supplemental opinion. (Oct. 20)

E-893 disapproves an agreement between Pan American and United States Lines, a steamship company, in which the company solicits passenger traffic for the air carrier in numerous foreign countries—issued with opinion. (Oct. 20)

E-894 disapproves application of John W. Hanes for permission to hold position as director of Pan American Airways while continuing as director and chairman of U. S. Lines' finance committee—issued with opinion. (Oct. 20)

E-895 through E-901 fix the temporary mail rates of 7 feeder lines at 60 cents a plane-mile for the first 6 months of operation, with 5-cent reductions made at succeeding 3-month intervals until the rate returns to the 35 cents a plane mile previously ordered for most of the carriers. The feeder lines are: Challenger Airlines; Empire Air Lines; Florida Airways; Monarch Air Lines; Southwest Airways; Trans-Texas Airways and West Coast Airlines. (Oct. 20)

E-902 revokes temporary exemption granted Pan American during the war allowing it to suspend San Francisco-Honolulu service at request of the Navy. (Oct. 20)

E-903 consolidates into one proceeding applications of Northeast, Colonial and Pan American for Boston-Bermuda service. (Oct. 21)

E-904 permits the Post Office Department, Eastern Airlines, Boston Chamber of Commerce, Commonwealth of Massachusetts, and the Aviation Committee of the New England Council to intervene in the Boston-Bermuda Service case, docket 1650. (Oct. 21)

E-905 allows Nevada Reno, Tonopah and Hawthorne, Nev., to intervene in the Additional California-Nevada Service case. (Oct. 21)

E-906 allows Sportman Air Service, an irregular carrier, to engage in foreign air transportation of persons between Buffalo or Niagara Falls, N. Y., and various fishing and vacation camps in Canada. (Oct. 21)

E-907 denies petition of Nationwide Air Transport Service for temporary exemption allowing passenger service between the U. S. and the island of Barbados, British West Indies. (Oct. 22)

E-908 rescinds order E-644 dismissing application of Brayton Flying Service for a "grandfather" certificate allowing nonscheduled service, and allows the carrier to present its case in written argument. (Oct. 22)

E-909 permits Houston and the Houston Chamber of Commerce to intervene in Latin American application of Pan American and Chicago and Southern Air Lines. (Oct. 23)

E-910 permits PCA to intervene in the "Skyerise" case, docket 2377. (Oct. 23)

E-911 denies addition of Phoenix, Ariz., to Monarch Air Lines' route 73. (Oct. 23)

E-912 allows Chicago and Southern to serve Terre Haute, Ind., through Hulman Municipal Airport, beginning November 1. (Oct. 23)

E-913 allows Monarch to serve Alamosa-Monte Vista, Colo., through Alamosa Municipal Airport in addition to the present service to Monte Vista Municipal Airport. (Oct. 23)

E-914 dismisses route application of Midwest Airways upon applicant's request. (Oct. 24)

E-915 revokes suspension of the letter of registration held by International Air Freight upon compliance with the requirements for irregular carriers. (Oct. 24)

E-916 suspends the new rate reduction proposals of United, Western, TWA, Inland, Southwest, PCA and American until an investigation is made to determine their lawfulness; denies petition of Stick Airways and the Independent Air Freight Association for reconsideration of earlier decision refusing suspension of the reduced tariffs of American, United and TWA which went into effect October 5—issued with opinion. (Oct. 24)

E-917 permits TWA to begin nonstop service between Cincinnati and Columbus, Ohio, November 1. (Oct. 24)

E-918 terminates suspension of the letter of registration held by Meteor Air Transport upon compliance of the carrier with the regulations affecting irregular carriers. (Oct. 28)

E-919 terminates suspension of letter of registration held by Twentieth Century Air Lines, an irregular carrier. (Oct. 28)

E-920 terminates suspension of letters of registration held by Chesapeake Airways, Transocean Air Lines and Caribbean American Lines. (Oct. 29)

E-921 grants a foreign air carrier permit to Swissair, Swiss Air Transport Co., for service between Geneva and Zurich, Switzerland,

and New York City via Shannon, Eire; Santa Maria, the Azores; and Gander, Newfoundland—issued with opinion. (Oct. 23)

E-922 allows Hughes Tool Co., to sell "Hughes Airline Radar Units" to TWA at cost. (Oct. 29)

E-923 denies motion of Eastern for consolidation of its application for Washington-Chicago service with those of PCA in the reopened proceeding. (Oct. 29)

E-924 allows Arrowhead Airways to carry persons between the U. S. and points in Canada which are not served by certificated carriers until the end of November. (Oct. 29)

E-925 dismisses proceeding on agreement between TWA and Swissair relating to agency representation upon termination of the agreement. (Oct. 29)

E-926 rules that agency representation agreements between TWA and Swissair, Iberia, Ethiopian Air Lines, Tata Sons and Aer Lingus Teoranta be made public. (Oct. 29)

E-927 amends Hawaiian Airlines' certificate to designate service to the island of Maui and Kauai in place of naming the specific points Maalaea and Port Allen on the islands—issued with opinion. (Oct. 8)

E-928 denies petition of Pinellas County Bureau of Aeronautics to consolidate its application with those of Clearwater, Fla., and Clearwater Chamber of Commerce for redesignation of St. Petersburg as St. Petersburg-Clearwater on National's route. (Oct. 29)

E-929 denies Pan American's petition for reconsideration of Western's extension from San Francisco to Portland and Seattle—issued with supplemental opinion. (Oct. 29)

E-930 terminates suspension of the irregular carriers Skyways International Trading & Transport Co., and Coastal Cargo Co. (Oct. 30)

E-931 approves National and Pan American agreement relating to sublease of floor space at the Miami International Airport. (Oct. 31)

E-932 approves Southwest Airways and United agreement relating to sublease of space at the Santa Barbara Terminal Building. (Oct. 31)

E-933 denies motion of Minneapolis-St. Paul Metropolitan Airport Commission that United file a plan for single-carrier or single-plane service between Minneapolis-St. Paul and Los Angeles as a condition to the certificate transfer from Western to United. (Oct. 29)

E-934 and E-935 lift suspensions of letters of registration held by Gulf & Western Airlines, Viking Airlines, and Capital Airways. (Oct. 31)

E-936 and E-937 allow George W. Snyder and E. Allen Elgert to hold positions in Challenger Airlines and Altair. (Oct. 31)

E-938 allows Gilbert R. Cook to hold positions in West Coast Airlines and Washington Aircraft and Transport Corp. (Oct. 31)

E-939, E-940 and E-941 dismiss proceedings against Caribe Airways, Air Freight and Universal Airlines concerning scheduled operations since all three of the companies are now involved in bankruptcy proceedings. (Oct. 31)

E-942 allows American to begin nonstop service between Boston and Detroit November 1. (Oct. 31)

E-943 allows American to begin nonstop service between St. Louis and Peoria November 3. (Oct. 31)

E-944 dismisses route application of Piedmont Aviation at applicant's request. (Oct. 31)

E-945 permits Fort Pierce, the Fort Pierce-St. Lucie C. of C. St. Lucie County, Auburndale, Eustis and DeLand, Fla., to intervene in the Additional Service to Florida case. (Oct. 31)

E-946 dismisses certificate application of Brady Transfer & Storage Co., at request of the applicant. (Oct. 31)

E-947 permits Colonial to serve Newark through use of La Guardia Field beginning November 1. (Nov. 3)

E-948 approves agreement between TWA, Chicago and Southern, American, Eastern and Mid-Continent relating to construction of baggage chutes and covering canopy at Lambert-St. Louis Municipal Airport. (Nov. 3)

E-949 approves Chicago and Southern-PCA agreement relating to the sublease of sales office space and utilities service at Memphis. (Nov. 3)

E-950 and E-951 lift suspension of letters of registration held by Arctic-Pacific, Magnolia Airlines and Arnold Air Service. (Nov. 3)

E-953, E-954, and E-955 dismiss applications of Southwestern Air Lines, Harry C. Straus and Marine Airway upon request of the applicants. (Nov. 3)

E-956 orders an investigation of the air freight tariffs filed by Flamingo Air Service and consolidates the proceeding with the investigation previously ordered for 10 other cargo carriers. (Nov. 3)

E-957 denies New Orleans-San Juan air service to Waterman Steamship Corp., and Waterman Airlines—issued with opinion. (Oct. 16)

E-958 and E-959 lift suspensions from Standard Air Cargo and Aviation Maintenance Corp. (Nov. 4)

E-960 dismisses route application of Baldwin Transportation Corp. at request of applicant. (Nov. 5)

E-961 permits American, Chicago and Southern, Northwest, Parks Air Transport, Post Office Department, Cedar Rapids and Davenport, Iowa, Moline, East Moline and Rock Island, Ill., the Association of Commerce of Moline and East Moline-Silvis, and the Cedar Rapids and Rock Island Chambers of Commerce to intervene in docket 1050 et al. (Nov. 6)

E-962 permits Swissair to begin service to New York City through LaGuardia Airport on November 6. (Nov. 6)

E-963 proposes a temporary mail rate of \$1.00 an airplane mile based on 22,000 miles flown in a month for Los Angeles Airways, helicopter mail carrier in the Los Angeles area. (Nov. 7)

E-964 and E-965 lift suspensions from the irregular carriers, Ren, Robbins and Johnson Flying Service. (Nov. 10)

E-966 fixes Braniff's temporary mail rate for Latin American service at 95 cents a plane mile based on an average monthly mileage of 3,185 miles. (Nov. 10)

E-967 allows Inland to suspend service at Spearfish, S. D., until the airport is adequate for the type of aircraft used by the carrier over the rest of its route. (Nov. 10)

E-968 extends exemption to allow Pan American to operate its U. S.-Africa service via Lisbon, Portugal, for an additional 3 months. (Nov. 10)

E-969 dismisses proceeding against Texas Air Lines for scheduled operation since carrier has discontinued all air transportation. (Nov. 10)

(See Airline Orders page 141)

Airman Orders

Pilot penalties for breaking the Civil Air Regulations are "grounding," or loss of certificate. In the most recent safety orders the CAB has meted out these penalties to the 62 airmen listed below.

The suspended pilots are grounded for various periods according to the seriousness of the violation. At the end of this time they can resume flying.

Before pilots on the revocation list can fly again, they must apply to the CAA for another certificate and retake the written examination and flight tests. Certificates are generally revoked for 1 year, although the term may be longer. And in a few cases the pilot may be prohibited from getting another certificate.

The order numbers are in parentheses. The "SD" orders are examiner's decisions. The "S" orders are those decided by the Board members when the pilot files exceptions to an examiner's findings and order. When the pilot does not appeal, the examiner's decision becomes the Board's final order.

Revocations

Joseph W. Yanuzzi, student, Larchmont, N. Y. (S-120).
Charles S. Hudson, private, Taft, Calif. (S-121).
Kenneth O. Grimbale, student, Lockport, N. Y. (S-122).
Rodney C. Vaught, student, Dayton, Ohio (S-124).
Donald V. Brunette, student, West Fargo, N. D. (S-129).
Billie W. Henderson, commercial, Houston, Tex. (SD-506).
James C. Robinson, student, Paducah, Ky. (SD-509).
Frederick A. Mesland, Jr., student, Orange, Mass. (SD-517).
Diamond D. Lacey Bourke, student, Great Barrington, Mass. (SD-519).
Allen L. Patee, student, Greensburg, Kans. (SD-522).
Henry L. Rodriguez, student, El Paso, Tex. (SD-526).
Newton J. Parkinson, student (SD-528).
Micky O. Roberts, student (SD-530).
Frank L. Wong, private, Fresno, Calif. (SD-542).
Levi J. Bales, private, Coffeyville, Kans. (SD-545).
William S. Brinkman, student, Scotia, Calif. (SD-548).
Cecil D. Spears, student, Banning, Calif. (SD-547).
Theodore W. Dettmann, student, St. Louis, Mo. (SD-550).
Charles W. Wyrick, student, Lockland, Ohio (SD-552).
Glen Thalla, student, Hagerstown, Ind. (SD-554).
Robert L. Klein, student, Cincinnati, Ohio (SD-555).
Loren P. Murphy, student, Waukegan, Ill. (SD-557).
Francis E. Bentley, student, Pleasanton, Kans. (SD-558).
Allen F. Bates, student, Fort Crook (SD-559).
Edward J. Hackney, student, Leavenworth, Kans. (SD-560).

Suspensions

Clyde F. Samson, student, 4 months, Inglewood, Calif. (S-118).
Vincent E. Brophy, commercial, 15 days, Cheetowaga, N. Y. (S-126).
Charles R. Panos, student, 6 months, Minneapolis, Minn. (SD-507).
W. R. Holland, private, 60 days, Cleburne, Tex. (SD-508).
Selden Newman, student, 30 days, Lafayette, Ill. (SD-510).
Walter J. Harubin, private, 60 days, North Hatfield, Mass. (SD-511).
John W. Womack, commercial, 4 months, Iola, Kans. (SD-512).
Everett E. Wiegand, private, 45 days, Wood River, Ill. (SD-513).
Edwin F. Brinkworth, private, 3-day token penalty, Seward, Alaska (SD-514).
Roland E. Wiegand, commercial, 30 days, Wood River, Ill. (SD-515).
Philip F. Laub, commercial, 30 days, New York (SD-516).
George A. Deault, student, of Spencer, Mass., until September 5, 1947. He surrendered his certificate August 26, 1946 (SD-518).
John T. Rogan, student, 6 months, Princeton, Mass. (SD-520).
Frank A. Smith, private, 4 months, Detroit, Mich. (SD-523).
John E. Lea, student, 6 months, Little Rock, Ark. (SD-524).
Dan Pashigoda, student, 3 months, Alva, Okla. (SD-525).
Robert V. Rankin, private, 30 days, Cedar Falls, Iowa (SD-527).
Kenneth H. Guio, student, 20 days, Big Piney, Wyo. (SD-529).
George P. Cobb, Jr., student, 6 months, Brooks Field, Tex. (SD-531).
John C. Foster, commercial, 3 months, Odessa, Tex. (SD-532).
W. H. Williams, A&E mechanic, 30 days, Jacksonville, Fla. (SD-533).
Andrew O. McEarchern, private, 3 months, St. Petersburg, Fla. (SD-534).
Andre R. Ricou, private, 3 months, Miami, Fla. (SD-535).
Robert W. Downs, student, 30 days, Chula Vista, Calif. (SD-537).
Paul Brooks, student, 6 months, Fresno, Calif. (SD-538).
Ray W. Salmon, Jr., student, 6 months, Fresno, Calif. (SD-539).
Orlando Albilar, student, 9 months, Yuma, Ariz. (SD-540).
Royal C. Main, student, 60 days, San Diego, Calif. (SD-541).
Clarence E. Jorgenson, private, 6 months, Iron River, Mich. (SD-543).
Raymond E. Shultz, private, 6 months, Burbank, Calif. (SD-546).
Clarence R. Hill, private, 90 days, Caruthers, Calif. (SD-549).
Harold W. Mouser, private, 30 days, St. Louis, Mo. (SD-551).
Carl J. Branch, student, 6 months, Herrin, Ill. (SD-553).
Chester B. Frye, commercial, 6 months, Manchester, Conn. (SD-562).
Herman J. Schroeder, commercial, 90 days, Miami, Fla. (SD-563).
Eulis B. Cochran, private, 4 months, Nicholasville, Ky. (SD-565).
Joseph Christophill, commercial, 4 months, Chicago, Ill. (SD-566).

Miscellaneous

Edwin S. Alexander, commercial, St. Albans, N. Y., previous 60-day suspension vacated and further hearing ordered (S-125).
Fourteen flight radio operators employed by TWA given until December 15 to get certificates (S-127).

Air Regulations . on December 1, 1947

TITLE	No.	PART			MANUAL		
		Price	Date	No. of Amend-ments	Price	Date	No. of Amend-ments
Aircraft							
Airworthiness Certificates.....	01	\$0.05	10/15/42	3	None	None	
Type and Production Certificates.....	02	.05	7/1/46	1	\$0.10	8/1/46	
Airplane Airworthiness—Normal, Utility, Acrobatic, and Restricted Purpose Categories.....	103	.25	12/15/46	3	None	None	
Airplane Airworthiness.....	04a	.15	11/1/43	9	.45	7/1/44	
Airplane Airworthiness Transport Categories.....	104b	Free	11/9/45	8	None	None	
Rotorcraft Airworthiness.....	06	.10	5/24/46	1	None	None	
Aircraft Airworthiness, Limited Category.....	09	.05	11/21/46		None	None	
Engine Airworthiness.....	13	.05	8/1/41		None	None	
Propeller Airworthiness.....	14	.05	7/15/42	1	.15	5/1/46	
Equipment Airworthiness.....	15	.05	5/31/46		No stock	7/1/38	
Radio Equipment Airworthiness.....	16	.05	2/13/41		Free	2/13/41	
Maintenance, Repair, and Alteration of Aircraft, Engines, Propellers, Instruments.....	18	.05	9/1/42		.60	6/1/43	
Airmen							
Pilot Certificates.....	20	.05	7/1/45	8	None	None	
Airline Pilot Rating.....	21	.05	10/1/42	4	None	None	
Lighter-than-air Pilot Certificates.....	22	.05	10/15/42	2	None	None	
Mechanic Certificates.....	24	.05	7/1/43	12	None	None	
Parachute Technician Certificates.....	25	.05	12/15/43	4	None	None	
Traffic Control Tower Operator Certificates.....	26	.05	10/10/45	2	None	None	
Aircraft Dispatcher Certificates.....	27	.05	7/1/46	1	None	None	
Physical Standards for Airmen.....	29	.05	1/10/46		None	None	
Flight Radio Operator Certificates.....	33	.05	8/1/47		None	None	
Flight Navigator Certificates.....	34	.05	8/1/47		None	None	
Flight Engineer Certificates.....	35	.05	3/15/47		None	None	
Operation Rules							
Air Carrier Operating Certification.....	40	.10	7/10/46	1	None	None	
Scheduled Air Carrier Operations Outside Continental United States.....	41	.05	5/1/46	14	None	None	
Nonscheduled Air Carrier Certification and Operation Rules.....	42	.05	8/1/46	6	.15	11/1/46	
General Operation Rules.....	43	.05	7/1/45	12	None	None	
Foreign Air Carrier Regulations.....	44	.05	7/1/45	1	None	None	
Operation of Moored Balloons.....	48	.05	9/28/47		None	None	
Transportation of Explosives and other Dangerous Articles.....	49	.05	7/1/45		None	None	
Air Agencies							
Airman Agency Certificates.....	50	.05	4/30/46		.15	5/15/46	
Ground Instructor Rating.....	51	.05	12/15/43	2	None	None	
Repair Station Rating.....	52	.05	10/1/42		Free	2/41	
Mechanic School Rating.....	53	.05	8/1/42	1	Free	5/40	
Parachute Loft Certificates and Ratings.....	54	.05	1/21/43		None	None	
Air Navigation							
Air Traffic Rules.....	60	.10	10/8/47		.15	10/45	
Scheduled Air Carrier Rules.....	61	.10	8/1/46	12	None	None	
Miscellaneous							
Rules of Practice Governing Suspension and Revocation Proceedings.....	97	Free	1/1/47	1	None	None	
Definitions.....	98	No stock	10/15/42		None	None	
Mode of Citation.....	99	Free	11/15/40		None	None	
Regulations of the Administrator							
Aircraft Registration Certificates.....	501	Free	5/1/47		None	None	
Dealers Registration Certificates.....	502	Free	5/1/47		None	None	
Recordation of Aircraft Ownership.....	503	Free	5/1/47		None	None	
Notice of Construction or Alteration of Structures on or near Civil Airways.....	525	Free	7/23/43		None	None	
Seizure of Aircraft.....	531	Free	12/8/41		None	None	
Reproduction and Dissemination of Current Examination Materials.....	532	Free	1/15/43		None	None	
Federal Aid to Public Agencies for Development of Public Airports.....	550	Free	1/9/47		None	None	
Acquisition by Public Agencies for Public Airport Purposes of Land Owned or Controlled by the United States.....	555	Free	1/9/47		None	None	
Claims for Reimbursement for Rehabilitation or Repair of Public Airports Damaged by Federal Agencies.....	560	Free	1/9/47		None	None	

¹ Certain aircraft may comply with the provisions of this part or part 04a.

² Special regulations 340 and 340C.

³ Special regulations 361A, 361C.

⁴ Special regulations 385, 390, 390B, 397, 397A, 403.

⁵ 43-1, 43-3, 43-5 are obsolete.

⁶ Special regulations 361A, 361C, 385, 390, 390B, 397, 397A.

NOTE: Those parts and manuals for which there is a price are

obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Currency is sent at sender's risk. Amendments, Special Regulations and free Parts are obtained from the Publications Section, Civil Aeronautics Board, Washington 25, D. C.; free Manuals and Regulations of the Administrator from the CAA Office of Aviation Information, Dept. of Commerce, Washington 25, D. C.

Air Passengers From Orient Get U. S. Clearance in Alaska

Passengers traveling by air from the Orient to the United States via Alaska will save time by a new arrangement for immigration clearance at Anchorage, Alaska.

The Civil Aeronautics Administration has been advised by the Immigration and Naturalization Service that after examination at Anchorage, passengers will be able to land anywhere in the United States, with no formalities other than showing that they have been cleared in Alaska.

Travel also will be speeded by the elimination of duplicate inspection of baggage, through the use of in-transit seals after clearance by the customs officer at Anchorage.

Expediting of international air travel through Alaska follows a similar move on Orient-U. S. flight via Hawaii. It is part of the general program for making international air travel easier, being pushed by the Civil Aeronautics Administration in cooperation with other members of the Air Coordinating Committee.

Scheduled Air Carrier Operations

Source: CAB Form 41

Domestic Trunk Lines—September 1947

Operator	Revenue miles	Revenue passengers (unduplicated)	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
American Airlines, Inc.	5,029,021	293,943	145,073	3,614.0	411,445	1,207,322	188,009	77.16
Braniff Airways, Inc.	936,635	56,838	19,079	244.9	68,935	51,998	27,687	68.91
Chicago & Southern Air Lines, Inc.	616,164	27,474	10,630	261.0	57,759	45,702	16,972	62.63
Colonial Airlines, Inc.	284,654	14,431	4,103	31.1	5,850	0	5,722	71.71
Continental Air Lines, Inc.	440,956	15,623	5,718	49.0	6,777	14,254	9,094	62.88
Delta Air Lines, Inc.	1,025,673	45,966	16,757	341.0	67,626	91,625	27,821	60.23
Eastern Air Lines, Inc.	3,863,509	159,612	71,485	834.6	232,644	282,707	128,119	55.67
Inland Air Lines, Inc.	189,119	7,144	2,801	18.0	4,164	3,455	3,728	75.13
Mid-Continent Airlines, Inc.	632,822	27,891	8,349	79.0	13,170	10,849	12,923	63.61
National Airlines, Inc.	690,924	25,606	12,165	111.0	42,995	30,862	23,739	51.24
Northeast Airlines, Inc.	337,925	27,666	5,496	114.4	9,703	8,376	9,056	60.69
Northwest Airlines, Inc.	1,440,891	65,363	36,736	375.5	120,709	112,272	44,648	82.28
Pennsylvania-Central Airlines Corp.	1,400,085	109,928	29,200	954.0	123,000	223,470	45,909	63.60
Transcontinental & Western Air, Inc.	4,384,411	113,349	85,249	1,056.0	397,393	519,768	115,168	74.02
United Air Lines, Inc.	5,653,701	211,676	132,800	1,733.0	534,713	1,074,375	162,822	81.56
Western Air Lines, Inc.	588,742	32,605	14,042	158.0	27,800	35,684	21,179	66.30
Total	27,515,232	1,235,115	599,683	9,974.5	2,124,683	3,712,719	842,896	71.15

Domestic Trunk Lines—January–September 1947

Operator	Revenue miles January–September		Revenue passengers (unduplicated) January–September		Revenue passenger-miles (000) January–September		Express and freight (tons) January–September	
	1947	1946	1947	1946	1947	1946	1947	1946
	1947	1946	1947	1946	1947	1946	1947	1946
American Airlines, Inc.	44,343,563	45,201,997	2,103,936	1,749,299	1,058,699	918,495	20,409.0	12,181.0
Braniff Airways, Inc.	8,219,930	8,377,264	438,286	386,489	148,799	157,318	1,845.9	1,225.9
Chicago & Southern Air Lines, Inc.	5,294,740	6,022,432	213,340	264,278	83,550	104,893	1,782.0	870.9
Colonial Airlines, Inc.	2,431,727	2,434,478	105,073	118,690	29,302	35,327	217.6	147.9
Continental Air Lines, Inc.	3,834,228	4,131,025	131,811	159,116	45,271	59,159	337.0	216.4
Delta Air Lines, Inc.	8,690,174	7,941,210	374,157	369,999	154,921	152,375	2,008.0	847.0
Eastern Air Lines, Inc.	33,603,657	29,307,225	1,254,712	1,098,230	650,695	564,170	6,801.3	3,851.2
Inland Air Lines, Inc.	1,669,540	1,500,055	61,436	62,207	21,551	17,207	127.1	63.5
Mid-Continent Airlines, Inc.	4,926,039	3,773,771	203,306	185,091	62,060	56,186	485.1	262.9
National Airlines, Inc.	7,108,558	6,597,364	238,952	208,367	123,755	122,994	880.5	290.5
Northeast Airlines, Inc.	3,072,351	2,913,419	251,258	302,414	48,294	61,538	687.9	340.0
Northwest Airlines, Inc.	12,948,925	13,554,394	505,266	461,925	272,176	283,503	2,448.1	1,348.5
Pennsylvania-Central Airlines Corp.	12,447,329	12,984,131	842,281	1,010,994	220,250	284,030	9,212.0	3,948.0
Transcontinental & Western Air, Inc.	35,690,424	33,502,084	777,963	733,123	602,419	622,902	8,208.0	8,004.0
United Air Lines, Inc.	44,563,306	40,504,647	1,483,411	1,296,686	919,707	800,413	14,036.0	7,000.4
Western Air Lines, Inc.	5,782,068	6,217,583	342,049	334,395	139,059	140,792	1,526.9	956.8
Total	234,626,559	224,872,079	9,327,237	8,761,303	4,580,508	4,381,212	71,112.4	41,644.9
Index (1946-100)	104.34	100.00	106.46	100.00	104.55	100.00	171.18	100.00

Operator	Ton-miles flown				Passenger seat-miles (000) January–September		Revenue passenger load factor (%) January–September	
	Express January–September		Freight January–September		1947	1946	1947	1946
	1947	1946	1947	1946				
	1947	1946	1947	1946	1947	1946	1947	1946
American Airlines, Inc.	3,523,431	3,107,182	6,545,658	3,331,724	1,485,159	1,073,487	71.29	85.56
Braniff Airways, Inc.	586,169	373,925	253,895	134,444	238,346	190,817	62.43	82.44
Chicago & Southern Air Lines, Inc.	479,651	313,501	234,658	8,221	141,329	141,897	59.12	73.92
Colonial Airlines, Inc.	45,560	34,789	0	0	48,034	47,194	61.00	74.66
Continental Air Lines, Inc.	62,689	47,034	83,940	36,742	79,030	86,032	57.28	68.76
Delta Air Lines, Inc.	513,246	334,180	485,517	51,700	245,398	203,576	63.13	74.85
Eastern Air Lines, Inc.	2,686,902	2,162,017	1,324,619	156,752	1,034,712	681,823	62.89	82.74
Inland Air Lines, Inc.	31,451	13,845	20,619	1,347	32,546	26,760	66.22	64.30
Mid-Continent Airlines, Inc.	105,855	92,081	53,356	0	99,617	74,255	62.30	75.67
National Airlines, Inc.	294,873	167,069	338,621	4,484	216,881	152,304	57.06	80.76
Northeast Airlines, Inc.	82,863	58,108	25,650	0	96,137	86,247	50.23	71.35
Northwest Airlines, Inc.	1,230,115	771,762	462,111	0	382,555	326,309	71.15	86.88
Pennsylvania-Central Airlines Corp.	1,523,351	804,595	1,437,776	85,985	412,398	380,790	53.41	74.59
Transcontinental & Western Air, Inc.	3,902,619	2,936,161	2,931,496	1,554,665	895,889	719,656	67.24	86.56
United Air Lines, Inc.	4,817,467	3,547,335	6,147,411	2,257,047	1,187,965	921,107	77.42	86.90
Western Air Lines, Inc.	321,383	261,068	307,999	100,188	215,581	179,015	64.50	78.65
Total	20,207,625	15,024,652	20,653,326	7,726,299	6,811,574	5,291,269	67.25	82.80
Index (1946-100)	134.50	100.00	267.31	100.00	128.73	100.00	81.22	100.00

Passenger-miles flown (total revenue and non-revenue, in thousands): January—388,289; February—380,606; March—503,466; April—535,254; May—574,303; June—556,562; July—553,950; August—621,950; September—619,494; Total—4,733,874.

Domestic Territorial Lines—September 1947

Operator	Revenue miles	Revenue passengers	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
Caribbean-Atlantic Airlines, Inc.	32,314	5,116	316	6.9	0	481	777	40.67
Hawaiian Airlines, Ltd.	231,033	24,534	3,442	399.0	10,038	46,280	5,039	68.31
Total	263,347	29,650	3,758	405.9	10,038	46,761	5,816	64.61

Scheduled Air Carrier Operations—Continued

Domestic Feeder Lines—September 1947

Operator	Revenue miles	Revenue passengers	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
All American Aviation, Inc.	154,956	0	0	25.2	3,254	0	0	—
Challenger Airlines Co.	87,998	1,973	491	6.0	1,206	367	1,848	26.57
Empire Air Lines, Inc.	75,605	1,348	292	1.0	292	0	754	38.73
Florida Airways, Inc.	63,799	690	87	1.3	111	0	540	17.06
Monarch Air Lines, Inc.	141,933	3,062	723	43.0	1,241	8,115	2,546	28.40
Pioneer Air Lines, Inc.	223,288	7,233	1,850	10.0	1,792	1,082	5,356	34.54
Southwest Airways Co.	217,338	11,211	2,085	42.0	4,122	1,954	4,486	46.48
West Coast Airlines, Inc.	101,187	6,279	787	6.4	650	0	2,153	36.55
Total	1,066,104	31,796	6,315	134.9	12,668	11,518	17,653	35.77

International and Overseas Air Carriers—August 1947

Operator	Revenue miles	Revenue passengers	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
American Airlines, Inc.	228,339	7,524	6,084	163.0	0	103,321	9,075	67.04
American Overseas Airlines, Inc.	895,711	8,308	21,865	56.7	195,330	0	30,905	70.75
Chicago & Southern Air Lines, Inc.	43,840	1,059	725	6.0	0	4,099	1,524	47.57
Colonial Airlines, Inc.	57,742	648	506	2	123	0	2,541	19.91
Eastern Air Lines, Inc.	62,062	1,624	1,626	5.0	0	13,408	3,103	52.40
National Airlines, Inc.	37,246	2,837	844	14.3	4,799	0	1,713	49.27
Northwest Airlines, Inc.	331,569	2,191	4,390	25.9	7,144	38,743	9,150	47.98
Pan American Airways, Inc.:								
Atlantic Division	1,252,016	13,202	33,452	88.9	318,029	0	47,508	70.41
Latin American Division	2,485,736	68,373	58,475	920.0	1,301,894	0	98,503	59.36
Alaska Operations	219,985	5,677	5,736	44.0	45,189	0	9,624	59.60
Pacific Operations	1,143,458	7,637	22,155	74.0	283,936	0	31,158	71.11
Pan American-Grace Airways, Inc.	497,856	8,778	8,770	191.0	139,992	0	14,755	59.44
Transcontinental & Western Air, Inc.	1,001,539	8,570	27,305	55.0	224,742	0	34,313	79.58
United Air Lines, Inc.	160,800	2,810	6,744	5.0	11,714	0	7,006	96.26
Uruba, Medellin & Central Airways, Inc.	20,584	361	120	12.0	3,968	0	391	30.69
Total	8,438,483	139,599	198,797	1,661.0	2,539,860	159,571	301,269	65.99

CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

Administration

CAA Orders Insulation Removed from DC-6 Baggage Section. (Nov. 6)

Air Travelers from Orient to U. S. Now Pre-cleared in Alaska. (Nov. 14)

CAA Sets Maximums and Minimums for Runways Constructed with Federal Funds. (Nov. 14)

CAA Studies Rental of Private Planes for Official Use. (Nov. 17)

CAA Reveals Results of Study of Critical Requirements of Airline Pilot's Job. (Nov. 22)

Address by George W. Burgess, Deputy Administrator of Civil Aeronautics, on "Airports in the Balance Sheet of Real Estate Values," before the National Association of Real Estate Boards, San Francisco, Calif., on Nov. 14.

Board

CAB Adopts Revised section 292.2 of the Economic Regulations. (Oct. 24)

Economic Regulation 292.6 Proposed for Noncertified Indirect Cargo Carriers. (Oct. 24)

Financial Statistics for 3 months ending June 30, 1947, and June 30, 1946. (Oct. 28)

CAB Amends Certificate of Hawaiian Airlines. (Oct. 30)

Foreign Air Carrier Permit Issued to Swissair, Swiss Air Transport Co. (Oct. 30)

CAB Denies Route Application of Waterman Steamship Corp. and Waterman Airlines. (Oct. 30)

CAB and CAA Commend Action of Airlines in Voluntarily Grounding DC-6's. (Nov. 12)

Chicago-Seattle Area Case Decision. (Nov. 13)

Eight CAA Training Bulletins Available in Spanish at G. P. O.

Civil Aeronautics Bulletins, translated into Spanish, may now be purchased from the Superintendent of Documents, United States Government Printing Office.

The Civil Aeronautics Bulletin number, title, and price of the presently available publications are as follows: No. 24, Navegación Aérea Práctica, \$0.60; No. 25, Meteorología para Pilotos de Aviones, \$0.75; No. 26, Aerodinámica para Pilotos, \$0.35; No. 27, Manual de Aviación para Pilotos, \$0.35; No. 28, Manual del Grupo Motopropulsor para Pilotos, \$1; No. 29, Manual de Radio para Pilotos, \$0.25; No. 31, Cartilla Terminológica para Maniobras Elementales de Vuelo, \$0.30; and No. 23, Manual de Adiestramiento para Pilotos Civiles, \$0.60.

These publications, which were translated under the auspices of a Department of State program for the exchange of cultural and scientific information with the Latin American Republics, may be purchased from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C. Remittances by check or money order should accompany all orders. Stamps are not acceptable and cash is sent at sender's risk.

Airline Orders

(continued from page 138)

E-970 amends Western's certificate to redesignate Chehalis, Wash., as Chehalis-Centralia, and to reflect the change of name of Marshfield, Oreg., to Coos Bay. (Nov. 12)

E-971 lifts suspension from Airline Transport Carriers' letter of registration. (Nov. 12)

E-972 allows El Dorado, Ark., to intervene in the Mid-Continent proceeding; denies intervention to Crossett, Ark. (Nov. 12)

E-973 awards Northwest service to Kalispell and Great Falls, Mont., in the Chicago-Seattle Area case; denies route applications of Duluth Airlines, Great Northern Airlines, G. I. Airlines and Western Air Lines—issued with opinion. (Nov. 12)

E-974 grants United temporary exemption allowing it to schedule nonstop service between Denver, on the one hand, and Seattle and Tacoma, Wash., Portland, The Dalles and Pendleton, Oreg., on the other. (Nov. 12)

E-975 fixes American Overseas Airlines temporary mail pay after July 1, 1947, at 75 cents a ton-mile for flights between the U. S. and the gateways, Gander, Glasgow, Shannon, or London, or between two or more gateways. For flights beyond the gateways 35 cents a plane mile will be paid on an average daily mileage of 5,220 miles. The sum of \$3,137,000 will be paid for the period Jan. 1, 1946, to June 30, 1947. (Nov. 12)

E-976 fixes the temporary mail pay for TWA's trans-Atlantic service at 75 cents a ton-mile from the U. S. to the gateways, Shannon, Paris or Lisbon, and at 35 cents a plane mile for flights beyond based on a daily average of 12,800 miles. The sum of \$3,328,000 will be paid for the period Feb. 5, 1946, to June 30, 1947. (Nov. 12)

E-977 fixes Pan American's temporary mail pay for trans-Atlantic service at 75 cents a ton-mile for U. S.-Bermuda flights and from the U. S. or Bermuda to Shannon, London, the Azores or Lisbon. The rate will be 35 cents a plane mile on a 9,200 base mileage for flights beyond the gateways. Mail pay from Jan. 1, 1946, to June 30, 1947, will be \$4,229,000. (Nov. 12)

E-978 withdraws from the temporary certificates issued 11 feeder carriers the provisions for applying for service pattern changes, since a general economic regulation now governs this process. (Nov. 10)

E-979 allows Challenger Airlines to skip Greeley, Colo., Lovell-Powell-Cody and Kemmerer, Wyo., on its second daily flight over the three route segments; and also to skip Greeley and Rawlins, Wyo., on an additional flight over segment 3 until lighting and navigation aids will permit night service over the route. (Nov. 7)

E-980 approves agreement between United and Southwest Airways relating to office space at San Francisco. (Nov. 13)

E-981 approves American-TWA agreement relating to lease of lobby, office and ticket space at the Albany airport. (Nov. 13)

E-982 orders Continental Air Lines to show cause why Board should not fix rate of mail pay on sliding scale formula allowing carrier 28.5 cents a plane mile when monthly passenger load factor is below 51 percent. Rate decreases as number of passengers increases. (Nov. 7)

E-983 allows Panagra to suspend service between Antofagasta, Chile, and Salta, Argentina, for 1 year. Should Panagra apply for permission to abandon service to these points within that period, the suspension will continue until disposition of the application. (Nov. 14)

E-984 approves agreement between United and Royal Dutch Airlines relating to handling of import and export shipment and similar matters. (Nov. 14)

E-985 proposes a temporary rate of mail pay for Alaska Airlines of \$517,000 from Nov. 1, 1945, to Sept. 30, 1947; a 60-cent per plane mile rate based on an average daily mileage of 1,000 miles after Oct. 1, 1947. (Nov. 17)

E-986 allows Pan American to serve Munich, Germany, as an intermediate point between Frankfurt, Germany, and Prague, Czechoslovakia. (Nov. 17)

E-987 approves agreement between American Overseas and the Swedish Airline SILA relating to maintenance of weather forecasting service. (Nov. 17)

E-988 approves agreement between Challenger and Monarch relating to joint ticketing arrangements at Salt Lake City. (Nov. 17)

E-989 approves American-Air France agreement relating to indemnification of air carrier for bond liabilities payable upon duly transferred export cargo. (Nov. 17)

Experimented With Gust Lock.—An experiment with the gust lock in flight was responsible for the shaking up the 53 occupants received in an American Airliner October 7 when the plane suddenly went into an outside loop near Mount Riley, N. Mex., the Civil Aeronautics Board reports.

The plane was righted by the co-pilot about 300 to 400 feet above the ground, and the flight turned back to El Paso where it landed safely. None of the 48 passengers or the crew of 5 were seriously injured, although they were shaken up and bruised.

Three pilots were on board the plane, bound from New York to Los Angeles. Capt. John Beck was acting as pilot, though actually on the trip as an observer. Capt. Melvin Logan was acting as co-pilot, and Capt. C. R. Sisto, in command of the flight, was seated in the jump seat and was acting in the capacity of check pilot.

Investigation revealed that while the airliner was at 8,000 feet over Mount Riley, Captain Sisto decided to engage the gust lock which locks the rudder, elevators and ailerons to determine what action, if any, it would have on the control and attitude of the plane from level flight.

The airplane started climbing and Pilot Beck moved the trim-tab control wheel forward in an attempt to bring the plane back to a level attitude. Continued movement of the control wheel failed to bring the nose down. At about this point Captain Sisto released the gust lock. The aircraft pitched downward into an outside loop in which it became inverted. The extreme nose-down trim of the plane brought about this violent maneuver.

Pilot Beck and Captain Sisto were thrown to the top of the cockpit, striking the feathering buttons on three of the engines, feathering the propellers. Co-pilot Logan, whose safety belt was fastened, managed to regain control and rolled the plane out of the loop.

Neither Pilot Beck nor Co-pilot Logan knew that the captain had engaged or released the gust lock.

Training Flight Crash.—Recovery from the maneuver which ended in a crash for two American Airlines' pilots on a training flight may have been complicated by unsecured ballast or defective instruments, the Civil Aeronautics Board found in its investigation of the accident at Ashland, Miss., August 25, 1946.

Both pilots lost their lives when the plane struck the ground in a vertical dive at such high speed that the left propeller hub and reduction gear assembly were buried more than 8 feet deep in hard ground.

Reason for loss of control or failure to recover was not determined. The CAB found, however, that neither directional gyro was functioning properly, and that 850 pounds of ballast was lying unsecured on the rear cabin floor.

Since the pilots were practicing unusual maneuvers at night over dark terrain in preparation for the CAA airline pilots' flight check, they would need the use of the full set of instruments. In this instance, the pilots were denied use of at least the directional gyro in recovery from unusual attitudes, the CAB indicated.

The CAB said also that the unsecured ballast in the passengers' compartment may possibly have caused a serious shifting of balance during unusual attitudes. "While the maximum possible movement of this ballast would probably not alter the center of gravity beyond approved limits, a sudden shift during an unusual maneuver may have produced a forward movement of the aircraft center of gravity location of almost 12 inches. Such a change in center of gravity would have had an appreciable effect on 'trim,' and the resulting change in control forces would obviously have complicated an attempt to recover from an unanticipated severe change in attitude," the CAB stated.

"Some laxity must be charged to the company for its failure to assure that the condition of the aircraft and its contents were suitable for the flight activity contemplated," the CAB said.

Ceiling Below Minimum.—The pilot's deliberate descent through an overcast to a dangerously low altitude in an attempt to land despite his knowledge that ceilings and visibility were below the CAA minimums is given by the CAB as the probable cause of the Pan American Airways accident at New Orleans, December 19, 1946. The flight was en route from Merida, Mexico.

In his third approach to the airport in an attempt to land, the pilot struck some trees. Although the plane was damaged he was able to land safely at Mobile, Ala. None of 45 occupants was injured.

Instrument weather was forecast for the New Orleans area and the alternates, Lake Charles and Mobile, before departure of the flight, and frequent reports were transmitted to the flight from the time it first reported over the New Orleans range station until it collided with trees.

The pilot did not make a standard "straight in" instrument approach, the CAB said, but attempted to circle underneath the overcast for a landing into the wind.

The pilot knew that the ceiling was below minimum before making his third instrument descent and approach. He also made this approach after the Pan American dispatcher at Brownsville advised that he proceed to Memphis.

Weren't on the Alert.—Blame for the midair collision of the Eastern Air Lines and Universal Air Lines transport at Aberdeen, Md., Dec. 19, 1946, has been placed on the pilots of both aircraft, with the edge of the blame on the Eastern crew.

Neither crew was sufficiently alert to other traffic, the CAB said in its report of the accident, which occurred after dark during contact weather conditions when the Eastern plane overtook the Universal plane.

The Universal plane, with an instrument flight clearance, left Newark 15 minutes before the Eastern plane, which was cleared to fly contact, and advised of the preceding flight.

Meeting on intersecting courses an hour later, the Eastern co-pilot saw the lights of the other plane to the left too late to avoid collision. Although he rolled the plane to the right and pulled up the nose, the tail section of the Eastern plane struck the top of the cockpit of the Universal plane. Neither Eastern's captain nor Universal's crew saw each other's planes. Universal mistook the object that struck them for a big bird.

Both planes were badly damaged, but remained controllable. Universal landed its 25 occupants safely at Aberdeen, and Eastern continued on to Washington with its 60 occupants. None was seriously injured.

Each crew should have been able to see the other plane, the CAB said. Shortly before the collision, the Eastern plane was at a relative bearing of 63 degrees right of Universal, and Universal was at a relative bearing of 43 degrees left of Eastern.

The pilots are responsible for avoiding other traffic when the weather permits them to "see and be seen," the CAB pointed out. Under the contact conditions in this instance, neither crew could presume that exclusive use of the airway at 2,000 feet had been granted their flight.

Pilot Lost Bearings.—Attempting a let-down without positively determining the position of the aircraft is given as the probable cause of the Eastern Air Lines' accident at Galax, Va., January 12. A contributing factor, the CAB reported, was the erroneous

navigation of the pilot which on at least two occasions led him to believe that he was farther south than he actually was.

The plane struck the top of a knoll 2,479 feet high in the Blue Ridge Mountains while the pilot was attempting an instrument let-down for a landing at Winston-Salem, N. C. The plane crashed about 63 miles northwest of the Winston-Salem range station at 1:38 a. m. Eighteen persons were killed and the one surviving passenger was seriously injured.

The CAB found that the flight was actually 53 miles north of Roanoke when the pilot reported that he was over that point, and that he believed he was southeast of Winston-Salem when he was actually 63 miles to the northwest. Instead of heading back toward the point for a landing, he was bearing away from it toward the northwest when he crashed.

The CAB also found that the pilot flew directly from Roanoke on the Winston-Salem radio, requesting clearance to a 3,000-foot altitude. Company specifications require flights to approach Winston-Salem on the Greensboro radio because of its longer range and superior dependability. Minimum company en route altitude between Roanoke and Winston-Salem is 6,000 feet.

Complicating the use of the medium-powered, loop-type Winston-Salem radio were a probable strong over-riding by Patterson radio, and two power interruptions a few minutes before the accident. These might result in a sudden direction reversal of the automatic direction finder normally experienced over a radio station, thus leading the pilot to believe he had passed over the Winston-Salem station, the CAB concluded.

Didn't Check Wind Direction.—A Delta Air Lines plane, landing with a tailwind, overshot a wet runway at Meridian, Miss., Nov. 10, 1946, and crashed into a railroad embankment adjoining the airport. None of the 22 occupants received serious injury.

Although the company radio operator reported the wind as northeast 10 mph when it was actually northwest, the pilot should have checked the wind facilities himself before landing on a wet runway under varying wind conditions, the CAB said.

Three wind socks and one lighted wind tee were located on the airport and operating satisfactorily at the time. With an 800-foot ceiling, the pilot could have circled the airport to determine the wind direction if he was not able to do so during the approach from the range station.

The plane, landing in a light rainstorm, touched the runway within the first 1,000 feet, rolled another 1,000 feet, and skidded the remaining 2,000 feet despite braking action.

Ceiling Too Low for Safety.—In trying to land at the Cleveland Airport under a 300-foot ceiling, the pilot of United Air Lines' flight 404 mistook the end markers of runway 23 for those of runway 31 on which he intended to land and consequently crashed about 600 feet beyond the north airport boundary.

The pilot and co-pilot were killed and 5 of the 17 passengers were seriously injured in the accident, which occurred Nov. 11, 1946, at 3:30 a. m. The flight was en route from Chicago.

Although the pilot did not know that bad weather had developed at Cleveland until he was over the airport, the reports during the last 30 minutes of flight indicated lowering weather. He was also in a position to know that the ceiling and visibility were below minimums when he passed over the airport below the overcast after completing approach.

Confronted with weather conditions below the 400-foot ceiling and 1-mile visibility minimums for the Cleveland Airport, the pilot should have given up his attempt to land there, the CAB pointed out.

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